

higher visibility in the image itself as compared with the case of the rear surface, the image area control amount is reduced as compared with the case where the front surface is the concave surface. Therefore, even with the same amount of curvature, it is possible to change the size of the image display area between the cases where the front surface is the convex surface and concave surface.

5. Another Example of Lookup Table

[0076] FIG. 17 is a diagram that graphically represents information corresponding to another example of the lookup table. In the example illustrated in FIG. 17, in a process of bending the display apparatus 100 and in a process of returning the curved display apparatus 100 to another state (e.g., unbent state), the image area control amount for the amount of change in resistance is changed.

[0077] In FIG. 17, a characteristic curve (indicated by a solid line in FIG. 17) corresponds to the process of bending the display apparatus 100. On the other hand, in the process of being returned to an unbent state from the curved state, a characteristic curve is indicated by a dashed line in FIG. 17.

[0078] In FIG. 17, the image area control amount may refer to an amount of change in the size of the selected image display area with respect to the maximum size of the display area of the display unit. For example, when the change in resistance is a small value (or at a predetermined threshold value such as T_h), then the image control amount is a relatively small amount (or may be defined to be zero for changes in resistance values less than or equal to T_h) and the amount of change of the size of the selected display area with respect to the maximum size of the display area is relatively small (or may be zero if the change in resistance values is less than or equal to T_h). In other words, in such a case, the difference between the maximum size and the selected display area may be a relatively small amount (or may be set to zero). However, when the change in resistance values is relatively large, then the display area experiences a greater amount of change in size with respect to the maximum size of the display area, as shown in FIG. 17. In this case, a greater resistance change amount may correspond to a greater change in the size of the display area from its maximum size.

[0079] For the area with a large amount of change in resistance, a change in the image area control amount for the amount of change in resistance can be further increased, and for the area with a small amount of change in resistance, the change in the image area control amount for the amount of change in resistance can be further reduced, so to thereby increase the speed of change in the display area when the display is in the process of being bent or unbent. Accordingly, during the process of returning to an unbent state from the curved state, it is possible to more rapidly return the image to its original state by the image area control. Therefore, when the curved display apparatus 100 is returned to a flat surface (e.g., unbent state), it is possible to reliably suppress discomfort of the user due to the image area control.

[0080] While exemplary embodiments of the present invention have been described in detail with reference to the accompanying drawings, the present invention is not limited to these embodiments. It should be understood by those skilled in the art that various modifications and alterations can be made within the spirit of the appended claims and they belong to the scope of the present invention.

What is claimed is:

1. An apparatus, comprising:
 - a bendable substrate;
 - light-emitting elements carried on said substrate;
 - a sensor configured to detect bending of the substrate; and
 - a display controller which controls said light-emitting elements at least in part based upon the bending of said substrate detected by said sensor.
2. The apparatus of claim 1, wherein the sensor detects an amount of curvature of the substrate.
3. The apparatus of claim 1, wherein the sensor detects a location of bending of the substrate.
4. The apparatus of claim 3, wherein
 - the display controller is configured to control a size of a display area of active light-emitting elements in accordance with the location of the bending.
5. The apparatus of claim 1, wherein the display controller controls a size of a display area of active light-emitting elements based upon the bending of the substrate detected by the sensor.
6. The apparatus of claim 5, wherein
 - the display controller is configured to reduce the size of the display area in accordance with the amount of bending detected such that a larger degree of bending corresponds to a smaller display area than a smaller degree of bending.
7. The apparatus of claim 1, further comprising:
 - another bendable substrate aligned with said substrate; and
 - another sensor configured to detect bending of the another substrate;
 wherein,
 - said display controller also controls said light-emitting elements at least in part based upon the bending of said another substrate detected by the another sensor.
8. The apparatus of claim 7, wherein
 - said display controller is configured to determine if a first side of said substrate is bent in a convex shape or a concave shape, said determination being based on a comparison between a result detected by said sensor and a result detected by said another sensor; and
 - said display controller is configured to control a size of a display area of active light-emitting elements based upon said determination.
9. The apparatus of claim 8, wherein
 - said display controller is configured to control the size of the display area differently when the first side is determined to be convex than when the first side is determined to be concave.
10. The apparatus of claim 1, wherein
 - said sensor comprises a transparent electrode body, said sensor being positioned such that said sensor opposes each of the display elements.
11. A display apparatus, comprising:
 - a display unit having a display area to display at least one image, said display unit including:
 - (a) a bendable substrate;
 - (b) light-emitting elements carried on said substrate; and
 - (c) a sensor configured to detect bending of said substrate; and
 - a display controller which controls said light-emitting elements at least in part based upon the bending of said substrate detected by the sensor.
12. The display apparatus of claim 11, wherein the sensor detects an amount of curvature of the substrate.